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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,823	01/04/2001	Akira Arai	9319A-000182	3470

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EXAMINER	
SHEEHAN, JOHN P	
ART UNIT	PAPER NUMBER
1742	17

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Please find below and/or attached an Office communication concerning this application or proceeding.

mak. 17

Office Action Summary	Application No. 09/754,823	Applicant(s) ARAI ET AL.	
	Examiner John P. Sheehan	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17 and 19-26* is/are pending in the application.

4a) Of the above claim(s) *13-17 and 19-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1 to 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al.

Wang teaches a specific example alloy having a composition that, with the exception of the boron content, is completely encompassed by the instant claims (Abstract, line 1). Wang's example alloy contains 4.58 at % boron while the instant claims require a minimum of 4.6 at% boron. Wang teaches that the alloy is a nanocomposite having a hard and a soft magnetic phase (Abstract). Wang teaches a method of making the disclosed alloy that is, similar if not, the same as applicants' method of making the claimed alloy composition (Wang, page 5097, under the heading "II. EXPERIMENTAL").

The claims and Wang differ in that Wang does not teach the boron content recited in the instant claims, is silent with respect to the magnetic properties recited in the instant claims and does not teach all the process limitations recited in the dependent product by process claims..

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the example alloy taught by Wang differs only in the B content (Wang's alloy contains 4.58 at% while the claims require 4.6 at%) and thus closely approximates the instantly claimed alloy composition and is so close that one would have expected that Wang's alloy and the claimed alloy to have the same properties, Titanium Metals v. Banner, 227 USPQ 773 and MPEP 2144.05. Further the process limitations recited in the instant dependent product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

2. Claims 1 to 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mohri et al.(Mohri, US Patent No. 4,765,848).

Mohri teaches a magnetic powder having a composition that overlaps the alloy composition recited in the instant claims (Mohri, column 3, lines 30 to 42 and column 5, lines 5 to 30). Mohri also teaches a process of making the disclosed magnetic powder that is similar to the process disclosed in the instant application (Mohri, column 5, lines 45 to 50).

The claims and Mohri differ in that Mohri does not teach the exact same alloy composition, is silent with respect to the claimed magnetic properties nor does Mohri teach all the process limitations recited in the dependent claims.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the powder alloy taught by Mohri has a composition that overlaps the alloy powder composition recited in the

instant claims and therefore is considered to establish a prima facie case of obviousness, In re Malagari, 182 USPQ 549 and MPEP 2144.05. Further, in view of the fact that the alloys taught by Mohri is made by a process which is similar to, if not the same as, applicants' process of making the instantly claimed alloy, the alloy taught by Mohri would be expected to posses all the same properties as recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

> "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada,15 USPQ2d 655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best,195 USPQ 430, 433 (CCPA 1977)." (emphasis added by the Examiner), see MPEP 2112.01.

With respect to the process limitations recited in the instant claims it is the Examiner's position that the process limitations recited in the instant product by process claims do not necessarily lend patentability to the claimed product, MPEP 2113.

3. Claims 1 to 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over each of Panchanathan (Panchanathan, US Patent No. 5,72,792, cited by the applicants in the IDS submitted January 4, 2001)..

Panchanathan teaches a magnetic powder having a composition that overlaps the alloy composition recited in the instant claims (Panchanathan, column 1, lines 37 to 50). Panchanathan also teaches a process of making the disclosed magnetic powder that is similar to, if not the same as, the process disclosed in the instant application

(Panchanathan, column 2, lines 1-21). Panchanathan teaches the presence of a hard and soft magnetic phase (column 1, lines 50 to 57). The composition of Panchanathan's Example N (column 3) is based on weight percent (column 1, lines 32 to 33) when converted to atomic percent (assuming that the atomic weight of the rare earth component is 144) has the composition:

Rare earth	7.6 atomic %
Boron	5.9 atomic %
Niobium	1.2 atomic % and
Iron	the balance.

Panchanathan discloses that the coercivity of Example N is 5.07 kOe or 399.5 kA/m.

These proportions and coercivity for Panchanathan's Example N are completely encompassed by the instant claims.

The claims and Panchanathan differ in that Panchanathan is silent with respect to the soft phase being constrained through the surrounding hard magnetic phase and the irreversible susceptibility.

However, one of ordinary skill in the art at the time the invention was made would have considered the invention to have been obvious because the alloy taught by Panchanathan has a composition that overlaps the alloy composition recited in the instant claims and therefore is considered to establish a prima facie case of obviousness, In re Malagari, 182 USPQ 549 and MPEP 2144.05. Further, in view of the fact that the alloy taught by Panchanathan is made by a process which is similar to, if not the same as, applicants' process of making the instantly claimed alloy, the alloy

taught by the reference would be expected to posses all the same properties as recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

> "Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada,15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best,195 USPQ 430, 433 (CCPA 1977)." see MPEP2112.01.

This considered to be particularly true in view of the fact that the composition and coercivity of Panchanathan's Example N alloy are encompassed by the instant claims and is made by a process which is similar to, if not the same as, applicants' process of making the instantly claimed alloy, the alloy taught by Panchanathan would be expected to posses all the same properties as recited in the instant claims, In re Best, 195 USPQ, 430 and MPEP 2112.01.

NOTE: The above rejection based on Panchanathan was first made in the Office action mailed February 26, 2002. This rejection was withdrawn based on applicants' argument that the B content of Panchanathan's Example N was only 1.07 % while the instant claims require 4.6 to 6.9 % B. However, applicants' claims are directed to atomic percents while the proportions of Panchanathan's Example N are in weight percent. Thus, a direct comparison between Panchanathan's proportions and the instantly claimed proportions is not proper. In view of this the Examiner has reinstated the rejection based on Panchanathan.

Double Patenting

The nonstatutory double patenting rejection has been withdrawn in view of the terminal disclaimer submitted January 3, 2003.

Response to Arguments

1. Applicant's arguments filed January 3, 2003 have been fully considered but they are not persuasive.

Wang et al.

Applicants, citing Wang at page 5098, column 2, lines 19 to 23, argue that Wang teaches an alloy that is magnetically soft whereas the instant claims are directed to a magnetically hard alloy. The Examiner is not persuaded. Wang teaches that the as quenched samples were magnetically soft but that after annealing the alloys developed coercivity values of 100 to 702 kA/m which encompass the coercivity values of 320 to 702 kA/m recited in applicants' claims (see Wang at page 5098, column 2, lines 24 and 25). Further, it is noted that the Wang's process of making the disclosed nanocomposite alloy, melt spinning to form the alloy and heating treating the alloy, is the same process disclosed by applicants (compare the instant specification page 17, line 23 to page 19, line 19 to Wang, page 5097, the process under the heading, II. EXPERIMENT).

Mohri

Applicants argue that while the rare earth alloy proportion taught by Mohri overlaps the rare earth component recited in applicants' claims each of Mohri's example alloys teaches the use of 17 atomic % rare earth which is much more than applicants claimed range of 7.1 to 9.9 atomic %. The Examiner is not persuaded. The teachings of a reference are not limited to merely that which is set forth in the examples. Instead "[a] reference may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art", MPEP 2123. In this case, Mohri teaches proportions, which overlap the instantly claimed proportions, and as set forth in the statement of the rejection such a teaching establishes a prima facie case of obviousness.

Applicants argue that dependent claim 6 calls for R to be comprised of rare earth elements containing Nd and/or Pr, that Mohri requires the use of La and Ce and one of skill in the art would not be motivated to use a rare earth component containing mainly Pr and/or Nd. The Examiner is not persuaded. In view of the use of the open terms "comprises" and "containing" in the phrase, "R comprises rare-earth elements containing Nd and/or Pr" (claim 6, lines 1 and 2) claim 6 is not restricted to Nd and/or Pr but rather is open to the inclusion of any other rare earths including La and Ce taught by Mohri. Further, there is no language in claim 6 that requires that the rare earth component is mainly Pr and/or Nd. Finally, in addition to La and Ce, Mohri teaches the use of any of the rare earths including Nd and/or Pr (column 3, line 40 and the example alloys appearing Mohri's Tables).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P. Sheehan whose telephone number is (703) 308-3861. The examiner can normally be reached on T-F (6:30-5:00) Second Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

John P. Sheehan
Primary Examiner
Art Unit 1742

jps
March 9, 2003